

REFERENCES

- BECHYNÉ, J. 1950. Eumolpides Américains nouveaux ou peu connus. Ent. Arb. Mus. Frey. vol. I, p. 205-236.
- BRÈTHES, J. 1919. Deux Coléoptères chiliens nouveaux. Anales Zool. Aplic. 6:26-29.
- FISHER, W. S. 1938. A new anobiid beetle (Coleopt.: Anobiidae) injurious to books. Proc. Ent. Soc. Wash., 40(2):43-44.
- MAGALHÃES, P. S. 1907. Sur les insectes qui attaquent les livres. Bull. Soc. Zool. France 32:95-100.
- . 1926. Dorcatoma bibliophagum (O caruncho dos nossos livros). Jornal do Commercio. Rio de Janeiro. p. 1-45.
- MONROS, F. 1956. Revision generica de Lamprosominae con descripcion de algunos generos y especies nuevas (Col. Chrysomelidae). Rev. Agron. Nor. Arg. 2(1):25-77.
- PHILIPPI, R. A. and F. PHILIPPI. 1864. Beschreibung einiger neuen Chilenischen Käfer. Ent. Zeit. Ent. Ver. Stett. 25(10-12):313-406.
- PIC, M. 1914. Ptinidae et Anobiidae (Col.). Suppl. Ent. No. 3, p. 8-11.
- . 1915. Nouveautés rentrant dans diverses familles. Mél. Exot.-Ent. 14:2-20.
- . 1923. Nouveautés diverses. Mél. Exot.-Ent. 40:1-32.
- SOLIER, A. J. J. 1849. Orden III. Coleoptera. In Gay, Historia fisica y politica de Chile . . . 4:414-511.

SYNOPSIS OF THE GENUS STATOR BRIDWELL IN THE WEST INDIES,
WITH DESCRIPTIONS OF NEW SPECIES
(COLEOPTERA: BRUCHIDAE)

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ABSTRACT—The genus *Stator* Bridwell is recorded from the West Indies for the first time. Characteristics, distribution and host plants are given for the 5 known species: *rugulosus* n. sp., *chalcodermus* n. sp., *bottimeri* n. sp., *cearanus* (Pic), n. comb., and *dufaui* (Pic), n. comb. Relationships with mainland species are discussed.

Bridwell (1946) described the genus *Stator* based on *Bruchus pruininus* Horn, but not assigning any other species to the new genus. Johnson (1963) revised the genus for the United States, treating six species, including one new species. Johnson (1967) and Bottimer (1969) have published on host plant associations for various species in the U.S. fauna, but did not add to the number of species.

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I have been unable to locate any reference to species of Bruchidae from the West Indies being assigned to *Stator*. This paper records five species, three of which are new, and two are reassigned, one of which is part of a circumcaribbean complex needing further study.

Stator occurs throughout the Western Hemisphere from the United States to Argentina, although many species which should be transferred to *Stator* are presently assigned to *Acanthoscelides* in Blackwelder's catalog (1946). A complete revision of the genus is planned, but names are needed for certain biological and faunal studies now underway.

A list of generic characteristics was given by Johnson (1963).

I am grateful to Mme. A. Bons, Museum National d'Histoire Naturelle, Paris, for her assistance in loaning the types of *Bruchus dufau* Pic and *B. cearanus* Pic.

***Stator dufau* (Pic), n. comb.**

Bruchus dufau Pic, 1927, p. 11.

Acanthoscelides dufau: Blackwelder, 1946, p. 759.

Body black. Antenna with four basal segments, tarsal pads, or occasionally entire tarsus reddish or reddish yellow. Vestiture of thinly scattered gray setae. Pygidium with three diffuse patches of gray setae on basal margin.

Head ovate with eyes strongly protruding laterally; depth of ocular sinus one-third length of eye; vertex and frons finely, densely fossulate, thinly setose; frontal carina prominent, microgranulate; antenna with seven distal segments forming a slightly eccentric, compact club. Pronotum subhexagonal, lateral margins in dorsal aspect angulate anteriorly, continuous in outline with margins of elytra; dorsal punctation fine, dense, discrete, thinly setose. Scutellum broader than long, depressed, densely setose. Elytra with strial rows normal, slightly impressed, with individual strial punctures discrete; intervals reticulate-strigate. Pygidium finely, densely punctate, each puncture bearing a short, appressed seta. Procoxae narrowly separated by prosternum. Mesosternum and metasternum shallowly foveolate with interspaces strigate-setigerous; metacoxal face finely foveolate, the foveolae discrete mesally but more densely placed and intricate laterally; metafemur with lateral ventral carina sinuately emarginate apically but without blunt angulation; metatibia with mucro length one-half of tibial width at its apex; lateral denticle one-half length of mucro; lateral carina sinuate, complete; intermediate carina obliterated; ventral carina prominent, sharp; dorsal coronal margin with three denticles. Male genitalia with ventral valve of median lobe triangular (fig. 2); internal sac finely spiculate, with large, triangular sclerite near middle of sac, hemispherical, denticulate sclerite near apex of sac; ejaculatory duct closed by circular valve flanked by thin, denticulate plates; lateral lobes (fig. 1) deeply cleft, bowed, expanded toward meson at apices.

Body length—2.75–3.0 mm. Maximum width—1.9–2.0 mm.

Holotype ♀ bearing label "Guadeloupe" and paratype ♀ with same data in the Pic Collection, Museum National d'Histoire Naturelle, Paris.

Type locality—Guadeloupe Island, West Indies.

New Records—PUERTO RICO: Aibonito, Aug. 3, 1923, June 9,

1934; Guyanilla, Feb. 21, 1933; Adjuntos, Mar. 23, 1933, in flower of *Inga laurina* (Sw.) Willd.; USDA Plant Quarantine interception, Puerto Rico, no specific locality, Feb. 24, 1941, in *Acacia riparia* H. B. K. ST. VINCENT: Kingstown, Oct., 1967. ST. THOMAS: Louisenhoj Estate, Mar. 26, 1941, in fruit of "*Ichthomenthia bicipula*" (sic) (now *Piscidia piscipula* (L.)). TORTOLA: Sage Mt., 1000', Apr. 17, 1956. ANTIGUA: June 18. ST. JOHN'S, VIRGIN IS.: Feb. 20, 1971, in seeds of *Acacia riparia*. All material in the USNM collection.

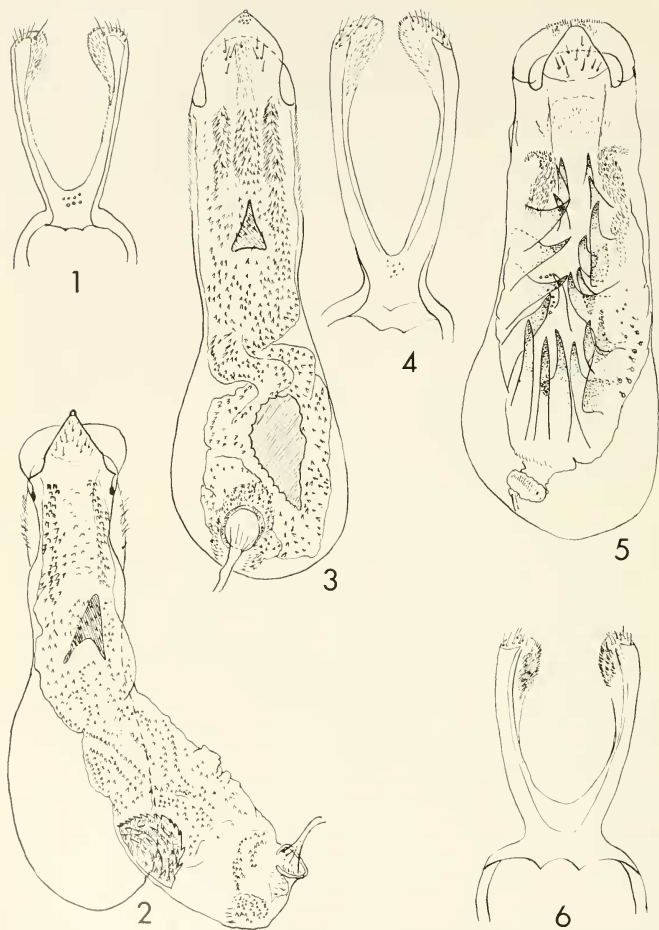
The habitus of *dufaui* is similar to that of *S. pruininus* (Horn) from the United States and Mexico, but the male genitalia indicate that the two species are only distantly related within the genus. The following characters differentiate *pruininus*: punctures of frons and vertex rounded, not fossulate; ocular sinus deeper than $\frac{1}{2}$ length of eye; pygidium densely, uniformly clothed with slender, gray setae which conceal the fine punctation; vestiture not condensed into spots on basal margin of pygidium; front and middle legs entirely red with base of femur fuscous in some specimens; metacoxal face finely, evenly foveolate; armature of internal sac in male genitalia with many fine teeth and spicules (Johnson, 1963, fig. 1). On the strength of characters in the δ genitalia, *dufaui* will fall into or near the limbatus species group.

I have not seen specimens of *dufaui* from the mainland.

***Stator rugulosus*, n. sp.**

Body reddish yellow to piceous; anterior $\frac{1}{2}$ of basal abdominal sternum piceous; disk of pronotum, disk of pygidium, indistinct sutural stripe and apical $\frac{1}{2}$ of elytra fuscous; legs reddish yellow; antennae yellow. Vestiture of long, narrow, yellow setae, densely, evenly placed on body except in mottled pattern on elytra.

Head with eyes moderately protruded; ocular sinus about $\frac{1}{2}$ length of eye; vertex and frons finely punctate-reticulate; frontal carina prominent, finely granulate; apical $\frac{1}{2}$ of clypeus finely granulate; postocular lobe reduced to fringe of coarse setae. Pronotum subconical, lateral margins nearly straight in dorsal aspect; lateral carina nearly hidden by vestiture, dorsal surface densely set with setigerous foveolae. Scutellum about as wide as long, setose. Elytra together slightly wider than long, finely but rugosely punctate on intervals, each puncture appearing to be the center of radiating strigulae; striae normal, marked by evanescent rows of setigerous foveolae in basal half, more distinct in apical half; pygidium finely, irregularly punctate, nearly concealed by vestiture. Procoxae not contiguous, separated by apex of prosternum. Mesosternum and metasternum punctate as on pygidium. Metafemur with lateral ventral carina gently sinuate subapically; metatibia with lateral carina partly obliterate, sinuate; intermediate carina lacking; mucro length $\frac{1}{3}$ of tibial width at apex; lateral denticle $\frac{1}{2}$ length of mucro; dorsal coronal margin with three denticles; metacoxal face densely punctate, punctation nearly concealed by vestiture. Terminal abdominal sternum strongly emarginate in δ for reception of apices of 8th tergite and pygidium, not emarginate in η . Male genitalia with ventral valve of median lobe ovate (fig. 3) with base broad, internal sac denticulate, denticles appearing to be in rows near apical orifice, macro-arma-



Figs. 1-2. *Stator dufau* (Pic), ♂ genitalia: 1, lateral lobes, ventral; 2, median lobe, ventral. Figs. 3-4. *S. rugulosus*, n. sp., ♂ genitalia: 3, median lobe, ventral; 4, lateral lobes, ventral. Figs. 5-6. *S. bottimeri*, n. sp., ♂ genitalia: 5, median lobe, ventral; 6, lateral lobes, ventral.

ture consisting of triangular sclerite near apical orifice and irregular, denticulate, bivalve sclerite near apex of sac; ejaculatory duct closed by circular valve at apex of sac flanked by curved, denticulate, thin sclerites; lateral lobes as in fig. 4.

Body length—2.75 mm. Maximum width—1.8 mm.

Holotype ♂—CUBA: Baraguá, Mar. 20, 1945, L. C. Scaramuzza, E. E. A. Cuba Entom. No. 11222, in seeds of *Pithecellobium discolor* Britton. USNM Type No. 70398.

Allotype ♀, paratypes 2 ♂, 2 ♀, same data as holotype. 3 ♂, 1 ♀ paratypes, Cuba: Baraguá, Mar. 11, 1942, L. C. Scaramuzza, E. E. A. Cuba Entom. No. 11220.

This new species is not closely related to any other species of *Stator* I have seen. Most species of *Stator* have a smooth or a minutely sculptured integument, but in *rugulosus*, the surface of the body is rugulose, with the rugulosities nearly effacing the puncture series of the elytra. The lateral carina of the pronotal margin is nearly hidden in the dense vestiture, but the hind femur and the form and armature of the ♂ genitalia are typical for the genus.

Stator rugulosus is known only from Cuba.

***Stator chalcodermus*, n. sp.**

Body black with bronzy highlights, front and middle legs red, hind legs black; antennae usually red but sometimes darker in middle segments of club. Vestiture of white or gray, coppery brown and golden setae intermixed and forming mottled pattern on elytra and pronotum with two irregular transverse rows of white spots on elytra; mixed coppery and gray beneath with lateral gray spots on abdominal terga; ♂ pygidium with mottled pattern similar to that on pronotum, and with vaguely condensed patches at anterior angles, disk with inverted, dark, U-shaped mark; ♀ pygidium with coppery sheen except each anterior corner with an elongate condensed patch of yellowish white setae, middle of basal margin with similarly colored small patch, apex with scattered small yellowish white setae.

Head with eyes moderately protruded; ocular sinus about one-half vertical length of eye; frons and vertex with dense, discrete, setigerous punctures; frontal carina with prominent, rounded boss between upper limits of eyes and extending as an impunctate line to fronto-clypeal suture, but sometimes faintly marked; clypeus densely punctate in dorsal one-half, granulate in ventral one-half; postocular lobe represented by narrow fringe of gray setae; segments of antennal club moderately eccentric. Pronotum campaniform; lateral margins slightly arcuate in dorsal aspect; dorsal punctures disciform, individual punctures ovate to circular, discrete, setigerous; interspaces flat, impunctate; basal lobe with short, median, impunctate sulcus. Scutellum rounded, densely setose. Elytra together as long as wide; striae rows normal faintly impressed longitudinally between setigerous, foveolate striae punctures; intervals densely microstrigate, setigerous. Pygidium of ♂ densely, finely punctate, nearly concealed by vestiture; of ♀ with dense, setigerous, disciform punctures in reticulate pattern but not concealed by vestiture. Procoxae nearly contiguous apically. Mesosternum and metasternum with punctation scattered, disciform, setigerous, interspersed with punctulation; metacoxal face with densely placed punctures in irregularly reticulate pattern covering entire coxal

face; metafemur with lateral ventral carina shallowly, sinuately emarginate subapically; metatibia with ventral and lateral carinae complete, the latter slightly sinuate, intermediate carina obsolete; mucro 3 times as long as lateral tooth but one-third as long as width of tibia at apex. Terminal sternum of abdomen emarginate in ♂ for reception of apices of eighth sternum and pygidium; not emarginate in ♀. Male genitalia with ventral valve of median lobe lancet-shaped (fig. 7), dorsal membranous hood rounded; internal sac with 10 to 12 flat, falcate, rather slender spines grouped in a circle near middle of sac, not linearly arranged as in *S. bottimeri*, valve of ejaculatory duct circular, ringlike; lateral lobes (fig. 6) flat, bowed, expanded medially at apex.

Body length—2.5–2.75 mm. Maximum width—1.5–1.75 mm.

Holotype ♂—JAMAICA: Kingston, June 14, 1958, M. W. Sanderson, (J-58-2), NE slope Long Mountain, beating vegetation. USNM Type No. 70397.

Allotype ♀ and paratypes 1 ♂, 3 ♀, same data. Other paratypes—JAMAICA: Port Royal, Aug. 5, 1967, 1 ♂, 1 ♀, C. W. O'Brien; St. Andrew Ferry July 12, 1959, R. P. Bengry, 1 ♀; Kingston, Palisades, Aug. 25, 1966, Howden and Becker, 2 ♂. HAITI: Hinche, Aug. 30, 1930, H. L. Dozier, 3 ♂, 4 ♀; Port-au-Prince, R. J. Crew, 1 ♂; Poste Terre Rouge, Oct. 5, 1934, P. J. Darlington, 1 ♀. DOMINICAN REPUBLIC: San Jose de las Matas, June, 1938, P. J. Darlington, 3 ♂; Puerto Plata Prov., Aug. 23, 1967, L. H. Rolston, 2 ♀; Barahona, Sept., 1938, P. J. Darlington, 1 ♂; Colonia la Altagracia, Pedernales, Mar. 22, 1967, 2 ♂; Tamboril, Aug. 6, 1965, 1 ♀. PUERTO RICO: San Juan, Sept. 10, 1969, light trap, 4 ♂; Isla Verde, July 3, 1969, 30 ♂, 20 ♀.

Paratypes are deposited in the U.S. National Museum of Natural History, Washington, D.C.; Canadian National Collections, Ottawa; Museum of Comparative Zoology, Cambridge, Mass.; Northern Arizona University, Flagstaff; Institute of Jamaica, Kingston; Texas A. and M. University, College Station, Tex.

Stator chalcodermus, n. sp., is most closely related to *S. subaeneus* (Schaeffer) from Texas and Mexico, but with the following differences: in *subaeneus*, the eye is flattened and nearly contiguous with the lateral margin of the head, the posterior margin expanded and merging with the lateral part of the vertex, while in *chalcodermus*, the posterior margin of the eye protrudes laterally and is well separated from the vertex; in *subaeneus*, the lateral ventral carina of the metafemur is strongly emarginate subapically, while in *chalcodermus* the carina is merely sinuate; in ♀ *subaeneus*, the antero-lateral white spots of the pygidium are set in a diffuse, lunate band of golden setae while those of ♀ *chalcodermus* are yellowish white sharply delimited against a darker background; in *subaeneus*, the armature of the internal sac of the ♂ genitalia (Johnson, 1963, fig. 6) is a mixture of short and long spines with the shorter spines near the base of the sac, while in *chalcodermus* (fig. 7), most the spines are grouped in a circle near middle

of sac but with a few spines at the apex of the sac long and slender; in *subaeneus*, the profile of the body in dorsal aspect is distinctly angulate at the juncture of the pronotum and the elytral humerus, while in *chalcodermus*, the profile is nearly contiguous.

Stator chalcodermus is known only from West Indian islands, while *subaeneus* is known only from the mainland.

***Stator bottimeri*, n. sp.**

In size, color and general appearance similar to *Stator chalcodermus*, n. sp. but with the following exceptions: hind legs entirely red; antennae entirely red, seldom with darker suffusion near apex; in ♀, lateral patches on pygidium pure white; body less bronzy; ♂ genitalia (fig. 5-6) with 18 to 20 flat, broad spines, those near apex of sac more slender than those in middle (cf. Johnson, 1963, fig. 6), lateral lobes (fig. 6).

Holotype ♂—CUBA: near Santiago, Aug. 31, 1917, H. Morrison, USNM Type No. 70396.

Allotype ♀—Same data as holotype.

Paratypes: Same data as holotype, 3 ♂. CUBA: Cayamas, Jan. 1, June 6, Nov. 3, E. A. Schwarz, 1 ♂, 2 ♀; Camaguey, June 19, 1950, Berg & Link, 1 ♀, June 3, 1942, 2 ♂; Soledad near Cienfuegos, May-June, 1939, Parsons, 1 ♂, 1 ♀; Santiago, Oct. 2-10, 1913, 3 ♂, 1 ♀. BAHAMAS: Abaco Cays, Elbow Cay, Hopetown, Hayden & Giovannoli, 1 ♂; Eleuthera, July 9-15, Wickham, 2 ♂, 1 ♀; South Bimini Is., May-Aug., 1951, 16 ♂, 4 ♀. FLORIDA: Stock Is., Apr. 10, 1944, in *Acacia pinetorum* Hermann (reported as *Vachellia insularis* A. Rich.), 1 ♂; Cudjoe Key, Mar. 9, 1945, 4 ♂, 2 ♀, Apr. 11, 12, 20, 22, May 1, 2, 17, 20, 1960, L. J. Bottimer, in *Acacia farnesiana* (L.) Willd., 76 ♂, 48 ♀.

Paratypes in Canadian National Collections, Ottawa; U.S. National Museum of Natural History, Washington; American Museum of Natural History, New York; Museum of Comparative Zoology, Cambridge, Mass.

Although this species and *chalcodermus* are extremely closely related, the consistent color differences and distinctions in the male genitalia are entirely adequate to separate them.

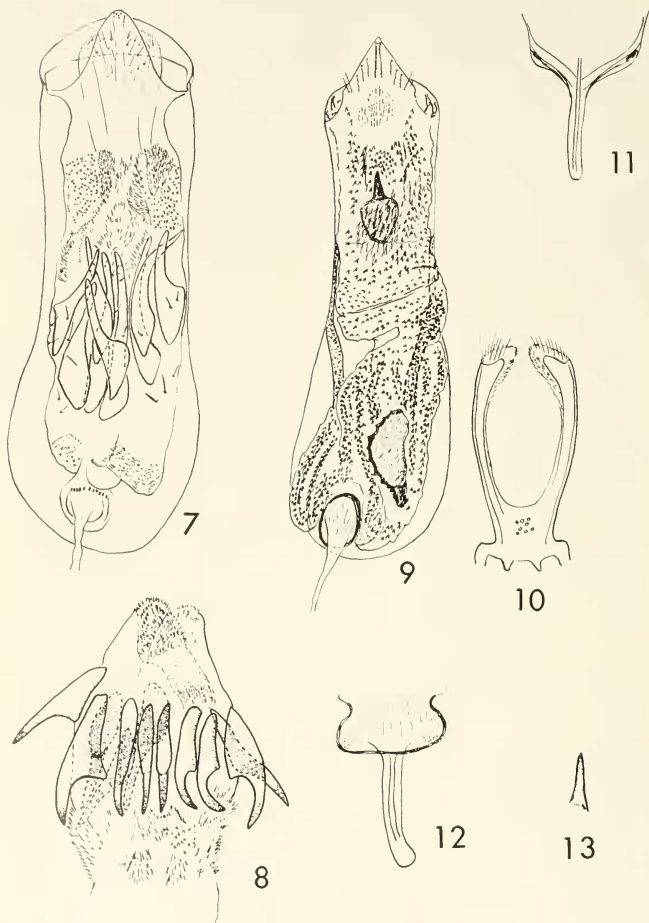
I am grateful to Mr. Larry J. Bottimer for turning over to me the Cudjoe Key material which he collected. He has contributed much to the study of the Bruchidae with his painstakingly documented reared material, and I am pleased to name this species for him.

***Stator cearanus* (Pic), n. comb.**

Bruchus cearanus Pic, 1930, p. 12; Bondar, 1936, p. 39.

Acanthoscelides cearanus: Blackwelder, 1946, p. 759.

Body black with the following exceptions: elytra red with intervals 1 and 2, humeri and marginal spot black; pygidium red, occasionally with basal margin



Figs. 7-8. *Stator chalcodermus*, n. sp., ♂ genitalia: 7, median lobe, ventral, (lateral lobes identical to those of *S. bottimeri*); 8, everted internal sac showing armature. Figs. 9-11. *S. cearanus* (Pic), ♂ genitalia: 9, median lobe, ventral; 10, lateral lobes, ventral; 11, spiculum gastrale. Figs. 12-13. *S. limbatus* (Horn), ♂ genitalia: 12, spiculum gastrale; 13, basal spine of internal sac.

piceous; abdominal sterna red except basal two-thirds of basal segment piceous; antennae red to yellow; labrum usually dark red. Vestiture of slender gray setae sparsely evenly distributed over dorsal and ventral surfaces except slightly more condensed on mesepimeron, along anterior margin of hind coxa, pleura of basal abdominal tergum, and in three vaguely defined, yellowish gray spots along basal margin of pygidium. Scutellum with dense, white pilosity.

Head short, subovate; eyes rounded, protruded laterally, well separated from lateral surface of head on posterior margin, postocular lobe narrow, setose, length of ocular sinus about one-half vertical length of eye; vertex and frons finely, densely punctate, punctures slightly coarser on basal two-thirds of clypeus, apical one-third of clypeus granulate; labrum finely, transversely striate, with transverse row of 6-8 silky, curved, golden setae; frontal carina vaguely defined as an impunctate line; antenna with segment 1 cucumiform, 2, 3 and 4 conical, 5 through 10 eccentric, trapezoidal, 11 elliptical, segments 5-11 forming a subserrate club. Pronotum broadly campaniform in dorsal aspect, apical margin evenly rounded, basal margin sinuate, ratio of width to length 11:7; dorsal surface evenly convex, slightly depressed on basal lobe, densely, evenly, finely punctate, the setigerous punctures separated by about their own diameters, an impunctate line on meson extending one-third length of pronotum from base toward apex; in lateral aspect, lateral margin inflexed, marked by a fine, polished, sinuate carina extending from postero-lateral angle to procoxal insertion; antero-lateral margin of pronotum posterior to eye with bisetigerous tubercle. Elytra with strial rows normal in course, not quite reaching basal margin; stria 1 extending submarginally around apex of elytron to end opposite hind coxa, striae 2, 3, 4, 8 and 9 extending nearly to apex, free apically, striae 5 and 6 short, joined apically, 10 submarginal, extending to a point opposite middle of apical abdominal sternum; strial rows shallow, punctures shallow, setigerous, causing scalloped margins on intervals; intervals microstrigate, setigerous, strigae interspersed with fine punctures. Scutellum quadrate, emarginate on posterior margin. Pygidium subtriangular, basal and lateral margins arcuate, marginal carina complete; surface densely set with very shallow, lunulate, or subhexagonal depressions, each with seta on its anterior border. Prosternum short, triangular, apex carinate, separating procoxae at their apices; postcoxal sulci of middle coxae meeting on meson; metasternal disk coarsely punctate; abdominal sterna densely, finely punctate, the punctures intermixed with microstrigae, punctures setigerous; apical margin of terminal sternum gently excised in ♂ to receive apex of pygidium; margin evenly arcuate in ♀. Front and middle legs normal, not modified; hind coxa densely, evenly punctate; hind femur clavate, lateroventral carina without subapical angulation, evenly sinuate, mesoventral carina with short, acute tooth; hind tibia with lateral, intermediate, ventral and mesal carinae complete, partial dorsal carina present; mucro short, about one-third as long as width of tibia at apex; lateral denticle prominent, acute; 3 or 4 dorsal coronal denticles present.

Male genitalia with ventral valve triangular (fig. 9), apex acute, incised laterally at base; armature of internal sac consisting of broad-based spine near apical orifice and an irregular, reniform sclerite serrate on one margin near apex of sac; gonopore closure valve ring-like, flanked by densely clustered pockets of fine denticles; interior of sac lined with many fine, acute denticles; lateral lobes (fig. 10) bowed in ventral aspect, rather short, with many sensitive setae at apices. Spiculum gastrale as in fig. 11.

Holotype ♀ bearing label "Ceara, 8-84," 8 ♂, 4 ♀, paratypes with same data, all in the collection of Museum National d'Histoire Naturelle, Paris.

Type locality—Ceará State, Brazil, S. A.

New records—ST. VINCENT: Botanical Gardens, in *Pithecellobium berterianum* Benth (now *P. fragrans* Benth). CARRIACOU IS.: (no locality), Mar. 3, 1932, in *Pithecellobium berterianum*. CURACAO: Schottgatwee, July 1-5, 1962, J. Maldonado C. JAMAICA: Kingston, Mar. 1, 1962. TRINIDAD: Port of Spain, May 8, 1925, S. A. Rohwer. VENEZUELA: La Vela de Coro, Mar. 20, 1918, in *Acacia* sp. COLOMBIA: Sta. Marta, P. J. Darlington; Rio Frio, P. J. Darlington. All material in the USNM except the latter in Museum of Comparative Zoology, Cambridge.

Stator cearanus is most closely related to *S. limbatus* (Horn) described from Baja California and Sonora, Mexico, but which ranges from California, Arizona and Texas to Panama (also introduced into Hawaii), and at least one other species, *Stator bisbimaculatus* (Pic) NEW COMBINATION (described in *Bruchus*) from Argentina and Uruguay. I have failed to find any external morphological characters other than color to separate these three species. The black abdomen, piceous antennal club and entirely black hind leg distinguish *limbatus* and *bisbimaculatus* from *cearanus* in which these parts are red; *limbatus* is distinguished from the other two by possession of a slender spine (fig. 13) near the apical orifice in the ♂ genitalia rather than a broad-based spine, and by the lyre-shaped, convex spiculum gastrale (fig. 12) rather than a simple, flat, Y-shaped type. Further collections are needed in Mexico and Central America and in northern South America to further elucidate the limits of these three species. For the present, the differences just outlined, however slight, will serve to distinguish them.

RELATIONSHIPS OF WEST INDIAN SPECIES OF STATOR

Of the 5 known species of West Indian *Stator*, *rugulosus* is known only from Cuba with no known relatives on the mainland, *chalcodermus* and *bottimeri* are closely related to species in Mexico and the United States, but not with any species yet known from Central or South America, and *cearanus* is part of a complex of 3 species reaching from western North America to Argentina. The relationships of *dufaui* are yet obscure, but characters in the ♂ genitalia place it near the *limbatus* complex.

REFERENCES

- BLACKWELDER, R. E. 1946. Checklist of the coleopterous insects of Mexico, Central America, the West Indies, and South America. Bull. U.S. Nat. Mus. 185:551-763.

- BONDAR, G. 1936. Notas biológicas sobre bruchideas observados no Brasil. Arch. Inst. Biol. Veg. 3:7-44.
- BOTTIMER, L. J. 1969. Bruchidae associated with *Mimosa*, with the description of a new species. Can. Ent. 101(11):1186-1198.
- BRIDWELL, J. C. 1946. The genera of beetles of the family Bruchidae in America north of Mexico. Jour. Wash. Acad. Sci. 36:52-57.
- JOHNSON, C. D. 1963. A taxonomic revision of the genus *Sator* (Coleoptera: Bruchidae). Ann. Ent. Soc. Amer. 56(6):860-865.
- . 1967. Notes on the systematics, host plants, and bionomics of the bruchid genera *Merobruchus* and *Sator*. Pan-Pac. Ent. 43(4):264-271.
- PIC, M. 1927. Nouveautés diverses. Melang. Exot. Ent., Moulins 48:1-32.
- . 1930. Nouveautés diverses. Melang. Exot. Ent., Moulins 55:1-36.
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INCORRECT USAGE OF THE TERM "NEW SYNONYMY"

The late Harold Grant explained to me, several years ago, why it is incorrect to label a newly established synonym as "new synonymy." He, as an editor, and I, as an author, have tried to establish in literature the correct usage as "new synonym" rather than "new synonymy." But bringing others to this usage has been slow. Perhaps a special notice would add some converts.

A dictionary (Webster's) definition of synonymy is: "The scientific names (incorrect and correct), collectively, which have been used in different books to designate a species or other group; also, a list of these names." The same dictionary defines synonym as: "One of two or more words of the same language having the same or nearly the same essential meaning in all or some of their senses." If one accepts these definitions as essentially correct, synonymy is the total list of synonyms and a new synonymy would be a new total list. An individual name newly added to the synonymy of a species or a genus would be a new synonym. Entomological authors commonly confuse synonymy (the total list) with the individual synonyms, and label each name newly added to the list a "new synonymy." The correct term for an addition to the synonymy is "new synonym."

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